AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1-46 (cancelled)

Claim 47 (new): A method for improving the functional properties of globular proteins, comprising the steps of:

a) providing a solution of one or more globular proteins, in which solution the protein is at least partially aggregated in fibrils; and

b) performing one or more of the following steps in random order:

i) adjusting the pH of the solution to about neutral;

ii) increasing the salt concentration in the solution;

iii) concentrating the solution;

iv) changing the solvent quality of the solution.

Claim 48 (new): The method according to claim 47, wherein the fibril-containing solution of the one or more globular proteins is provided by heating a solution of the one or more proteins above room temperature, preferably at a temperature between about 50 and 100°C at a pH between about 0.5 and 4.

Claim 49 (new): The method according to claim 48, wherein the fibril-containing solution of the one or more globular proteins is provided by heating a solution of the one or more proteins above room temperature, preferably at a temperature between about 50 and 100°C at a pH between about 0.5 and 3.

Claim 50 (new): The method according to claim 48, wherein the solution is heated during a period of at least 10 minutes.

Claim 51 (new): The method according to claim 48, wherein the solution is heated during a period of at least one hour.

Claim 52 (new): The method according to claim 48, wherein the solution is heated during a period of at least 6 hours.

Claim 53 (new): The method according to claim 48, wherein the solution is heated during a period of at least 8 hours.

Claim 54 (new): The method according to claim 47, wherein the solution is cooled before performing one or more of steps i) to iv).

Claim 55 (new): The method according to claim 54, wherein the solution is cooled to a temperature between denaturation temperature and 20°C.

Claim 56 (new): The method according to claim 54, wherein the solution is cooled to a temperature between denaturation temperature and 5°C.

Claim 57 (new): The method according to claim 48, wherein the heating is performed at a pH below 2.8, preferably below 2.5, more preferably below 2.2.

Claim 58 (new): The method according to claim 47, wherein the fibril-containing solution of the one or more globular proteins is provided by adding a denaturing agent to the solution.

Claim 59 (new): The method according to claim 58, wherein the denaturing agent is a hydrotropic or chaotropic agent.

Claim 60 (new): The method according to claim 58, wherein the denaturing agent is selected from the group consisting of ureum, guanidinium chloride and alcohols, such as methanol, ethanol, propanol, butanol and trifluorethanol.

Claim 61 (new): The method according to claim 50, wherein the solution has a pH of 0.5-14.

Claim 62 (new): The method according to claim 48, wherein the globular protein is a protein that is substantially non-denatured and is capable of being thermally denatured at a temperature at or above the denaturation temperature of the protein or capable of being chemically denatured.

Claim 63 (new): The method according to claim 48, further comprising the step of adding already formed fibrils to the solution prior to production of the fibril-containing solution.

Claim 64 (new): The method according to claim 63, wherein the already formed fibrils are obtainable by the method according to claim 48.

Claim 65 (new): The method according to claim 63, wherein the amount of already formed fibrils based on the total amount of protein is more than 0 and less than 90%.

Claim 66 (new): The method according to claim 63, wherein the amount of already formed fibrils based on the total amount of protein is between 10 and 80%.

Claim 67 (new): The method according to claim 63, wherein the amount of already formed fibrils based on the total amount of protein is between 20 and 70%.

Claim 68 (new): The method according to claim 63, wherein the amount of already formed fibrils based on the total amount of protein is between 30 and 60%.

Claim 69 (new): The method according to claim 47, wherein the pH is increased to a value between 3.9 and 9.

Claim 70 (new): The method according to claim 47, wherein the pH is increased to a value about neutral pH.

Claim 71 (new): The method according to claim 47, wherein the salt concentration is increased to a maximum of 0.2M.

Claim 72 (new): The method according to claim 47, wherein the salt concentration is increased to a maximum of 0.1M.

Claim 73 (new): The method according to claim 72, wherein the salt used for increasing the salt concentration is the salt of a divalent ion, preferably calcium.

Claim 74 (new): The method according to claim 72, wherein the salt used for increasing the salt concentration is the salt of calcium.

Claim 75 (new): The method according to claim 47, wherein step i) is performed prior to step ii).

Claim 76 (new): The method according to claim 47, wherein the solvent quality of the solution is changed by removing the denaturing agent.

Claim 77 (new): The method according to claim 47, further comprising the step of drying the solution to obtain a dry product.

Claim 78 (new): The method according to claim 77, wherein the drying comprises spray drying.

Claim 79 (new): The method according to claim 77, wherein the dry product is a powder.

Claim 80 (new): The method according to claim 47, wherein the globular protein is selected from the group consisting of whey and proteins, egg albumins, blood globulins, soy proteins and wheat proteins.

Claim 81 (new): The method according to claim 47, wherein the globular protein is selected from the group consisting of prolamines, potato proteins and pea proteins.

Claim 82 (new): The method according to claim 80, wherein the globular protein is a whey protein isolate or a whey protein concentrate.

Claim 83 (new): The method according to claim 80, wherein the globular protein is a whey protein concentrate enriched in β-lactoglobulin.

Claim 84 (new): The method according to claim 83, wherein the globular protein is the whey protein isolate Bipro™.

Claim 85 (new): The method according to claim 83, wherein the globular protein is β-lactoglobulin.

Claim 86 (new): A protein additive based on a system of one or more proteins that are at least partially aggregated in fibrils, wherein the protein additive has improved functional properties as compared to a similar protein additive based on a system of the same one or more proteins in the same concentration in which the proteins are not aggregated in fibrils.

Claim 87 (new): The protein additive according to claim 86, wherein the functional properties are one or more of the following: foaming properties, thickening properties, gelling properties and emulsifying properties.

Claim 88 (new): The protein additive obtainable by the method according to claim 47.

Claim 89 (new): The protein additive according to claim 86, wherein the protein additive is in dry form.

Claim 90 (new): The protein additive according to claim 86 for use as a stabilizer of foams, dispersions and emulsions.

Claim 91 (new): The protein additive according to claim 86 for use in dairy products.

Claim 92 (new): The protein additive according to claim 86 for use in meat products.

Claim 93 (new): The protein additive according to claim 86 for use in paints.

Claim 94 (new): The protein additive according to claim 86 for use in toothpastes, cosmetics, deodorants.

Claim 95 (new): A dairy product comprising the protein additive according to claim 86.

Claim 96 (new): A meat product comprising the protein additive according to claim 86.

Claim 97 (new): A paint comprising the protein additive according to claim 86.

Claim 98 (new): A toothpaste comprising the protein additive according to claim 86.

Claim 99 (new): A cosmetic comprising the protein additive according to claim 86.

Claim 100 (new): A deodorant comprising the protein additive according to claim 86.

Claim 101 (new): A protein composition comprising one or more particles having texturizing properties, wherein the protein molecules are aggregated into fibrils.

Claim 102 (new): The protein composition according to claim 101, wherein the texturizing properties comprise the ability to promote or modify the viscosity or gelling ability of a product containing the composition.

Claim 103 (new): The protein composition according to claim 101, wherein the fibrils have an aspect ratio defined as the ratio between length and width or length and height or length and diameter of 5 or higher.

Claim 104 (new): The protein composition according to claim 101, wherein the length of the fibrils is preferably equal to or about 100 Å and equal to or below 1 μm, preferably below 100 μm.

Claim 105 (new): The protein composition according to claim 104, wherein the length of the fibrils is preferably equal to or above 100 Å and below 100 μm.